

**GRADUATE STUDENT ORIENTATION
INFORMATION PACKET**

WATER CENTER
TENNESSEE TECH UNIVERSITY

September 13, 2011

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AGENDA

Welcome

Dr. Dennis B. George, Water Center Director
dgeorge@tntech.edu

Brief introduction and Water Center history. Explanation of graduate student work ethic. Information regarding the process and requirements for graduation.

Information on

- sexual harassment: <http://training.newmedialearning.com/psh/tntech/index.htm>
 - plagiarism: <http://www.indiana.edu/~wts/pamphlets/plagiarism.shtml>
 - ethics: http://ori.dhhs.gov/education/products/montana_round1/research_ethics.html
 - electronics and dissertation program: <http://www.tntech.edu/graduatestudies>
-

GROUP INFORMATION

Computer Facilities

Yvette Clark, R & D Engineer, yrclark@tntech.edu, 372-3004

Administrative Items

Sandra Pigg, Secretary, spigg@tntech.edu, 372-3519
Sandy Dodson, Receptionist, sdodson@tntech.edu, 372-3507

Financial Items

Mary Williford, Financial Analyst, mwilliford@tntech.edu, 372-3938
Glenda Shanks, Grants Fiscal Clerk, gshanks@tntech.edu, 372-3810

Water Center Questionnaire/Interview

Amy Knox, Editor, akknox@tntech.edu, 372-3464

Water Center Laboratory

Dan Dodson, Laboratory Mgr., ddodson@tntech.edu, 372-3061

Mission and Vision

The Center for the Management, Utilization and Protection of Water Resources at Tennessee Tech was created to mobilize an interdisciplinary team of professionals to address the increasing demands on water resources in Tennessee, the surrounding region and the nation. This mission is accomplished through research, education and public service.

The goals of the Center are

- to enhance research by addressing diverse water-related problems in Tennessee, the nation and the world;
- to enhance educational opportunities through research, university instruction and educational outreach; and
- to enhance citizens' quality of life by providing technical assistance and technology transfer to peers, citizens and industry.

VISION: Enhancing Environmental Education Through Research

Strategic Approach

Wise use and management of natural resources requires an understanding of the interrelationship among natural systems that govern the movement of water, air and soil in the environment. Protecting these resources requires the combined expertise of professionals from multiple disciplines who understand these natural systems and the negative impacts human activities have on them.

At the Center, researchers work to increase knowledge of natural systems and provide information to decision makers about how to protect and sustain precious water resources. Their work explores the complex interrelationships among the biological, chemical and physical properties that influence water movement and its quality within watersheds.

Major Center research is focused on **environmental resource management and protection, prevention of environmental hazards, and development of environmental informatics techniques**. The Center works to ensure that our natural resources are managed and protected properly by studying watershed reservoir dynamics and biocomplexity and developing innovative technologies for waste conversion, treatment and/or disposal. Fisheries professionals with the Center also study fish ecology to understand their behavior and protect endangered species. Environmental forecasting, planning and training provided to industry, government, communities and private landowners are methods by which the Center's faculty work toward resource protection. Evaluation of environmental hazards is concentrated in the areas of hydrologic forecasting, flood and drought mitigation, and prevention of the transport of waterborne pathogens. Remote environmental monitoring, database integration and geospatial analysis, and process modeling and forecasting are among the research topics of Center professionals in the field of environmental informatics.

TTU Pathway to Graduate Degree

Admission

- I. Submit appropriate paperwork
 1. Application (online or paper)
 2. Application fee payment
 3. Official transcripts
 4. Letters of recommendation
 5. Official test scores—based on departmental requirements
 6. Student health form
- II. Complete application files will be evaluated by the appropriate department. Master's and Ed.S. in Education are evaluated by the Graduate School.
- III. Notification of admission decision sent to student.
- IV. If admitted in Provisional Standing as a result of incomplete application credentials, the deficiencies must be removed prior to enrollment in a second semester. Lack of test scores will restrict enrollment to 9 hours.
- V. Nondegree Students (Special Standing) wishing to change to a degree program must submit to the Graduate School a Change of Graduate Major form (<http://www.tntech.edu/graduatestudies/pdf/changeMajor.pdf>).
 - a. **No more than 9 hours earned in Special Standing may be counted toward a degree program.**

Advisement

- I. Contact the major department for advisement.
 - a. The contact name/number is provided on the Certificate of Admission.
- II. The departmental chair will provide student with PIN/RAC codes for registration.

Registration

- I. The student will register online using the information provided by the department.
- II. Once the course selection process is complete, the student will pay fees and confirm enrollment.
 - a. The enrollment confirmation must be completed, even if the student is not responsible for the payment of fees.

The Road to Graduation

- I. Complete the Advisory **Committee and Program of Study** Form (available at www.tntech.edu/graduatestudies/forms.html)
 - a. The advisory committee should be formed by the completion of 9 hours of graduate work.
 - b. Program of Study form must be completed by the time 15 hours of graduate credit have been earned or registration will not be permitted.
 - c. For the Master's programs, the Advisory Committee, Program of Study and Admission to Candidacy form is one document.

- II. Apply for **Reclassification to Full Standing**—this step is not required of students admitted to the Graduate School in full standing.
- a. For students with incomplete application credentials--reclassification to full standing will be processed by the Graduate School when the deficiencies have been removed.
 - b. For students with other conditions noted on the Certificate of Admission (such as completion of 9 hours with a certain GPA, submission of final degree certificate, etc.)--submit the Application for Reclassification to Full Standing (available at http://www.tnitech.edu/graduatestudies/pdf/reclass_mas_eds.pdf or http://www.tnitech.edu/graduatestudies/pdf/reclass_phd.pdf). The degree sought will determine which of the two forms must be completed.
- III. Apply for **Admission to Candidacy**
- a. For the Master's programs, the Advisory Committee, Program of Study and Admission to Candidacy form is one document.
 - b. Ed.S. students will complete the Ed.S. Application for Admission to Candidacy form (available at http://www.tnitech.edu/graduatestudies/pdf/eds_CanApp.pdf)
 - c. Ph.D. students—once the Comprehensive Exams are complete, the student's advisor will send a memo to the Graduate School indicating such and requesting that the student be admitted to candidacy. This memo must be approved by the student's advisory committee, the departmental chairperson, and the Associate Dean of the college. Consult with the Advisory Committee Chairperson regarding the timing and specific requirements of the Comprehensive Exam an Admission to Candidacy.
- IV. **Apply for Graduation**
- a. The application for graduation must be submitted **no later** than the first Friday of the semester in which graduation is expected.
 - b. The Graduate School will notify the student within **one week** of receipt of application of items needed/missing for graduation.
 - c. The applications may be found at http://www.tnitech.edu/graduatestudies/pdf/mastersEds_grad.pdf or http://www.tnitech.edu/graduatestudies/pdf/doctor_Grad.pdf. The degree sought will determine which of the two forms must be completed.
- V. Complete **Comprehensive Exam**—Master's, Ed.S.
- a. Master's, Ed.S.
 - i. This is scheduled directly with the department, not the Graduate School.
 - ii. Consult the department for exam date.

- iii. The results of this exam must be received by the Graduate School **three weeks** prior to graduation.
- b. Ph.D.
 - i. Consult with the Advisory Committee Chairperson regarding the timing and specific requirements of the Comprehensive Exam and Admission to Candidacy.

VI. Thesis/Dissertation Defense

- a. This should be scheduled with the student's advisory committee.
- b. Notify departmental chairperson and/or Associate Dean as appropriate.
- c. The results of the defense must be received by the Graduate School three weeks prior to graduation.

VII. Thesis/Dissertation Submission

- a. Thesis/Dissertation Preparation Guide available at www.tntech.edu/graduatestudies/thesis
- b. The preliminary copy must be submitted to the Graduate School for review no later than **three weeks** prior to graduation.
 - i. Submit preliminary copy of the thesis/dissertation to the Graduate School.
- c. The advisory committee chairperson must request the Graduate School to review the Thesis/Dissertation.
- d. The final copies must be submitted to the Graduate School **one week** prior to graduation.
 - i. Two copies of a thesis are required.
 - ii. Three copies of a dissertation are required (includes one copy for microfilming).
 - iii. Thesis/Dissertations must be prepared using 25% cotton, 20 lb paper.

Please see www.tntech.edu/graduatestudies/etd/ for information on electronically submitting your thesis/dissertation.

Center for the Management, Utilization and Protection of Water Resources

Graduate Research Assistantships

The Center for the Management, Utilization and Protection of Water Resources (CMUPWR) offers funding for graduate assistantships to qualified university faculty, who in turn seek outstanding students, subject to the policies of TTU and the College of Engineering. Faculty mentors and graduates receiving Center support conduct research that is relevant to the Center's mission. The Center expects a certain technical/professional work outcome in return for the assistantship pay. The student has the primary responsibility to make acceptable progress in the research work in order to receive continued funding by the Center. The student, with the approval of the faculty member, will submit brief progress reports periodically to the Center.

The three pillars of higher education are teaching, research, and service, all of which are valuable to graduate students' education and training for their future careers. To pursue these opportunities of higher education, graduate students can choose from a variety of financial package options, including a combination of loans, grants, scholarships, fellowships, and fixed stipends. Assistantships are also an option for graduate student funding for higher education and are a form of graduate student employment, providing a compensation package that includes both a salary and a scholarship used for tuition and fees. The assistantship allows students to perform research, teaching or other support services for the University as part of their academic and professional training and development. Assistantship students will be appointed as a Research Assistant (RA), Teaching Assistant (TA) or Graduate Support Assistant (GSA) with a maximum of 20 hours per week of assigned duties. The major faculty advisor (or other assigned departmental faculty, in the instance of a TA and GSA) determines the duties of the appointment. In extenuating circumstances, the student's major advisor, department chair, college dean, and the Associate Vice President for Research and Graduate Studies may approve increasing the workload of a full-time assistantship graduate student by 10 hours per week, for a total of 30 hours. This may only occur four times within any one academic year. Graduate students may also hold multiple concurrent assistantships, subject to the limit of 20 hours per week. No vacation or sick benefits are applicable. Arrangements for any variation in work hours, including time off for vacation, holidays, or illness, should be made individually with the major advisor (or other assigned faculty, in the instance of a TA and GSA). Graduate assistants receiving teaching, research, or support assignments are expected to devote sufficient hours per week as may be required to perform all duties necessary to satisfactorily complete all degree requirements.

An international graduate student, who is on an F-1 or J-1 visa, can work no more than 20 hours per week while school is in session. On-campus employment may exceed 20 hours per week during the summer for eligible international students who plan to register for the following semester if approval is granted by their major advisor, department chair, college dean, Office of International Student Affairs, and the Office of Research and Graduate Studies. Under federal regulations, volunteering by an

international graduate student for teaching, research or other support activity is regarded as employment that must be compensated at a fair wage.

If, for any reason, a change in the academic advisor of the student occurs, it is the responsibility of the student to find a new academic advisor. Financial support for graduate students resides with the faculty mentor; therefore, a student may lose his or her financial support upon changing mentors.

Center for the Management, Utilization and Protection of Water Resources

GRA Appointment Agreement

Date: _____ Faculty: _____
Student: _____ Department: _____
Degree Sought: _____ Exp. Grad. Date: _____

Brief description of the research work to be performed by the student:

(Should it become necessary to make significant changes in the above, the Director of the CMUPWR must be consulted.)

Expected major outcomes in support of the CMUPWR's mission:

_____(Student) _____(Faculty)

GRA Amt: _____ %Appt: _____ %Fees: _____ Duration: _____

_____(Director)

This agreement is subject to all applicable policies of TTU and the College of Engineering.

GRADUATE STUDENT INFORMATION

- Graduate student information sheets need to be filled out and returned to the departmental receptionist as soon as possible. Please keep your information current.
- Before your appointment begins, you will be notified of the time/date to sign your contract in the Human Resources Office in Derryberry Hall. Please sign your paperwork as soon as you are notified by our office.
- All graduate students must have an I-9 (authorization to work in this country) on file in the Human Resources Office. This also needs to be done before your appointment is effective. Please be aware of the expiration date of your I-9 card and renew it when necessary.
- All mail from this office will be sent to your academic department unless other arrangements are made. It is your responsibility to check your mailbox. A mailbox is available in PH 233 if you choose to use it (see Sandy Dodson).
- No personal typing will be done in the Water Center office. However, our secretary and editor are available to assist students with their thesis/dissertation if it is to be part of a published article, and the editorial staff is available to **assist** with computerized graphics as well.
- Personal copies or printouts cannot be made on the office copier or printer. **Students will bear the cost of thesis/dissertation copying and presenting.**
- Students who are taking trips (in-state or out-of-state) to seminars, conferences, etc., should have travel requisitions approved by the project leader and the Water Center director before travel begins.
- Orders for supplies, chemicals, etc., may be directed through Sandra Pigg in the Water Center Office (PH 233, extension 3519). An account number must be provided for the order charges. If you have any questions concerning policies for ordering, call Ms. Pigg. All orders of \$5,000 or more must be placed on bid using standard university procedures. Procedures not followed will be the responsibility of the student and/or project director.
- Monthly Progress Reports may be required by some project directors. Students who are required to do so must leave reports with the departmental secretary in PH 233 at the end of each month.
- It is recommended that master's graduate students register for 9 credit hours in the fall and spring semesters and doctoral students register for 6 credit hours. Graduate students registered for less than 6 hours are required to pay 7.65% of their stipend for FICA and Medicare.

- When a graduate assistant resigns, is terminated or withdraws from the University during a semester, remuneration for the assistantship, including tuition and fees, will be made by the student on a prorated basis. (Excerpt from The Graduate School Catalog.)
- Graduate students who have worked with the Water Center for at least a year will be asked by the editorial staff to complete a questionnaire or to schedule an interview to discuss how they feel about the quality of education and experiences they have had while working with Water Center researchers. We ask for this information so we can make changes to improve the quality of education and experiences our graduate students receive. Positive comments will be used, with the student's permission, for Water Center public relations materials. The identity of the students making the comments or suggestions will be confidential.
- If you have an accident at work, contact your supervisor to report the injury and complete an Accident Report form. We have a card from the "State of Tennessee Workers' Compensation Program" that you should carry with you, giving the phone numbers of whom to contact for the name of a provider authorized to treat you. If you do not have one of these cards, Sandy Dodson or Glenda Shanks and they will provide you with one.
- Motor Pool reservations can be made with Sandy Dodson at extension 3507. An account number is required for the issuance of an IDT for the charges. Pickup and return of the vehicles will take place in the Water Center office at Prescott Hall, Room 233. A list of policies and guidelines is located in each vehicle bag.
- Gasoline purchased for Water Center vehicles while traveling must be purchased at designated Fuelman and Fleetone locations. Refer to the travel manual provided with the vehicle for Fuelman locations.
- All graduate students must complete a Confidentiality Agreement that will remain on file in the Water Center.
- The Water Center staff will assist you with any other information you may need. If you need assistance, please let us know.

CMUPWR: Travel Support Policy

The Center for the Management, Utilization and Protection of Water Resources (CMUPWR) has a limited budget to support travel by faculty, students, and staff associated with the Center. In general the following outlines the policy for providing financial support by the Center for travel, subject to availability of funds. All travel undertaken with financial support from the Center should follow the policies and other requirements of TTU.

The first priority will be for travel by faculty members associated with the CMUPWR to visit potential funding sponsors. It is expected that all preliminary contacts have been already established and the sponsor encourages a visit for face-to-face discussions. Examples are, visiting the NSF Program Manager at DC, ORNL, a USDA facility, EPA laboratory or visiting an organization collaborating in the preparation of a joint proposal.

Second priority will be for travel to attend a conference/meeting for presenting a technical paper based on the results of a project funded through the CMUPWR. In such cases, the CMUPWR will provide only partial funding of the total cost. It is expected that other sources such as an academic unit, F&A return, etc. will be sharing in the cost.

It is cautioned that no one should assume that the CMUPWR will necessarily provide financial support even if the proposed travel falls in one of the above categories. In those cases, a commitment of personal time or funds would be necessary.

It is recognized that there will be unusual circumstances or special cases not falling in the above categorization. In such cases, the individual seeking travel support is encouraged to discuss the details with the CMUPWR Director well in advance of the proposed travel.

PLEASE READ BEFORE SIGNING FOR A MOTOR POOL VEHICLE

1. Drivers must be TTU employees. (A student who is employed by TTU and receives a TTU payroll check may drive.)
2. A travel authorization form must be completed and signed by your supervisor before a motor pool vehicle can be checked out or driven. Blanket travel authorization is available to students that travel on a regular basis.
3. Bring the vehicle back with a full tank of gas. Record the mileage and turn this in with the key and bag.
4. When you return, park the vehicle in the designated parking spaces marked "Water Center Vehicles" next to the Old Maintenance building. If you return during office hours, return the key and bag to the Water Center office. If after hours, take the key and bag with you, then deliver them to the Water Center at 8:00 am on the next working day.
5. Under no circumstances are vehicles to be taken home. If you are keeping a vehicle overnight, park the vehicle at TTU and keep the key and bag on your person.
6. While in the State of Tennessee, you must use either FUELMAN or FLEETONE fuel credit cards. If you fail to use the designated fuel credit cards, a memo must accompany the fuel receipt indicating why you did not use them.
7. When out of state, try to find FUELMAN or FLEETONE stations. If not available, you may use any fuel credit card.
8. There is a FUELMAN site listing, by city, for all the Tennessee locations and other procedural and/or emergency information in a second blue bag, which stays inside each vehicle.
9. FLEETONE pin number is 3227. FUELMAN pin number is located on the credit card.
10. Put the last four digits of the vehicle license number on fuel credit card receipts.
11. In case of emergency, it is your responsibility to get back to campus. The Water Center will not pick up vehicle users.
12. If a vehicle not under warranty breaks down, have the vehicle towed to Doc's Auto.
13. Vehicles should be brought back in a condition satisfactory for the next user.
14. Reservations for two or more weeks in advance and for extended use should be made in writing by the project director.
15. A \$15 per day fee will be imposed if notification of cancellation is not given to the Water Center prior to scheduled departure date and time. The amount of \$15 per day will also be the minimum usage charge per day.
16. Be sure to lock vehicle when you return it to the Water Center.

Center for the Management, Utilization
and Protection of Water Resources

GRADUATE STUDENT INFORMATION

NAME _____

HOME ADDRESS _____

LOCAL ADDRESS _____

E-MAIL ADDRESS _____

HOME PHONE _____ **WORK PHONE** _____

OFFICE LOCATION _____

MAJOR PROFESSOR _____

COMMITTEE MEMBERS (IF KNOWN) _____

**THESIS/DISSERTATION
TITLE/PROJECT** _____

STARTING DATE OF GRADUATE PROGRAM AT TTU _____

DATE YOU EXPECT TO GRADUATE _____

TODAY'S DATE _____

QUESTIONS AND ANSWERS

Q: What if I try to confirm enrollment and authorization for fees has not reached the Business Office?

A: If you try to confirm enrollment and cannot, you may need to show the cashier a copy of your Personnel Action Form (PAF). Even if fees are being paid by the Water Center, be sure to confirm your enrollment each semester so that your schedule will not be cancelled. Each semester after registering, you should notify the Financial Aid Office if schedule adjustments are made.

Q: What if I need to use the Water Center's computer facilities?

A: Yvette Clark is our R&D Engineer in charge of the Water Center's computer facilities. She will be able to assist you with computer support and information. Yvette can be reached at extension 3004.

Q: Who handles what duties in the Water Center? Whom do I need to see for specific work?

A: Accounts: Glenda Shanks (funded projects) or Mary Williford (Water Center)
Graphics/Editorial Assistance: Amy Knox Keys/ordering supplies/word processing/typing: Sandra Pigg Motor pool/information/assistance/mailboxes: Sandy Dodson

Q: How many hours do I need to take for a full load each semester, including summer?

A: Nine credit hours per semester for master's students are recommended, six for doctoral. For summer semester, three credit hours only. Students deferring loan payments should consult the Graduate School to determine the minimum number of hours required to defer payment.

Q: What should I do if I decide to leave school before my assistantship is completed?

A: It is important that you not only talk with your advisor, but also talk with our office as soon as you know you are leaving. Paperwork must be done for your termination. Keys and library books must be returned before leaving. Also, withdrawing from school before the end of the semester will require you to reimburse the university for tuition and fees.

**Tennessee Tech University
Graduate Studies
Important Dates & Deadlines**

Fall 2011

May 1	Last Day for International Applicants to Apply for Fall 2010 Admission
August 1	Last Day for U.S. Applicants to Apply for Fall 2010 Admission
August 26-27	Registration for Fall Term 2010
August 30	Late Registration Begins (\$100 late fee)
August 30	Classes Begin
September 2	Last Day to Register
September 6	Labor Day Holiday, no classes, offices closed
September 8	Last Day for Schedule Adjustments
September 10	Last Day to Apply for December Commencement
September 10	Last Day to Drop without a Grade
November 5	Last Day to Drop with a Grade of "W"
November 24	Comprehensive Exam/Thesis Defense Deadline
November 24	Preliminary Copy of Thesis/Dissertation Deadline
December 10	Final Copy of Thesis/Dissertation Deadline
December 10	Deadline to Remove "Incompletes" if graduating in December
December 18	Commencement

Dear Student,

To improve our graduate student programs, we are surveying all students who will have been supported by the Center for the Management, Utilization and Protection of Water Resources for at least one year in January 2011. **You may have received a survey similar to this in other semesters. If you responded previously, you may either disregard this one or submit new comments (if new situations have arisen) in this survey.** We use the survey results to increase the Water Center's responsiveness to students' needs and enhance the effectiveness of the Water Center's programs. You may also call me at 372-3464 if you prefer to schedule a personal interview.

If you want your answers to remain anonymous, print the questions below, mark your responses and return it to my attention at Campus Box 5033. After I have received all the responses, I will compile a confidential report for Dr. Dennis George, Water Center director. Thank you for your time and contributions. Your input is extremely important.

SURVEY QUESTIONS

1. How helpful on a scale of 1 to 10, with 1 being "not helpful" and 10 being "very helpful," do you feel the experience you are gaining while participating in Water Center research will be in your career or further education?
2. How helpful, using the same scale as in Question 1, has having access to Water Center resources and staff services been to you?
- 3a. Please note from the following list which Water Center resources or staff services you have used. If you used one or more of these services, rank on a scale of 1 to 10, with 1 being "extremely unsatisfied" and 10 being "extremely satisfied," how satisfied you were with the service experience.
Financial Services, Computer Laboratory, Editorial Services, Environmental Quality Lab Services, GIS Laboratory, Motor Pool, Secretarial Services
- 3b. Rank on a scale of 1 to 10, with 1 being "poor" and 10 being "excellent," the overall quality of the Water Center's services and resources.
- 3c. Rank on a scale of 1 to 10, using the same scale as in question 3b, the accessibility of these services and resources.
- 3d. Rank on a scale of 1 to 10, using the same scale as in question 3b, the staff responsiveness within each segment.
- 3e. Were you aware of the availability of these services and resources?
4. Have you already obtained a job in your chosen field or specialty area? How long have you been looking or how long did you look for a job?
5. What suggestions can you recommend for improving graduate students' experiences while working with the Water Center?
6. Are there any additional comments you would like to add concerning the quality of your experience with the Water Center or Tennessee Technological University?

END OF SURVEY QUESTIONS

** If you agree to allow us to use your responses in public relations materials, please note this in your e-mail response

Thank you for your help,
Amy Knox,
Editor, Center for the Management, Utilization and Protection of Water Resources

Administration and Faculty

Dennis B. George	Director of Water Center, Professor of Civil and Environmental Engineering
Sharon G. Berk	Professor of Biology
G. Kim Stearman	Professor of Agriculture

Staff

Phillip Burr	Research Technician I
Yvette Clark	Research and Development Engineer
Halambage Upul Deepthike	Postdoctoral Research Associate
Daniel Dodson	Laboratory Manager
Sandy Dodson	Receptionist
Ginger Ensor	Research Assistant II
Tyler Hern	Research Assistant I
Tomas Ivasauskas	Research Assistant II
Yoichiro Kanno	Postdoctoral Research Associate
Amy Knox	Editor
Michael Kuley	Research Assistant II
Mark Miller	Research Technician II
Kendall Moles	Research Assistant II
Kenneth Morgan	Research Specialist
Sandra B. Pigg	Secretary 3
Barbara Rosensteel	Research Specialist
Glenda Shanks	Grants Fiscal Clerk
Colin Shea	Postdoctoral Research Associate
Mary Williford	Financial Analyst
Samantha Wyatt	Research Technician II

MEMORANDUM

TO: Water Center Graduate Students

FROM: Water Center Secretarial and Editorial Staff

DATE: September 13, 2011

SUBJECT: Assistance with Reports and Presentations

If you are a Water Center graduate student working on a report or presentation for an external funding agency, we are available to assist you. For assistance formatting documents or tables, contact Sandra Pigg in the Water Center (telephone: 372-3519 or e-mail spigg@tntech.edu). For assistance with computer graphics, photographs, and presentation title banners or posters, contact Amy Knox, Water Center (telephone: 372-3464 or e-mail akknox@tntech.edu). An account number must be provided to print posters. Printing is billed at \$0.75 per square foot on matte paper. Two days' notice is required for only printing a poster; two weeks' notice is required for designing and printing.

Our time may be supported by the project. Therefore, you will be asked to fill out a work order form that includes your project function number and the name of your major professor.

Please prepare documents in Microsoft Word for Windows whenever possible. Using tabs is preferable to spaces, and paragraph indents should be used rather than tabs or spaces for paragraphs that are entirely indented.

In preparing project reports that can be expanded for use in your thesis or dissertation, please use the formatting requirements in the Graduate School's publication Guide to the Preparation of Theses and Dissertations. This document is available online at <http://www.tntech.edu/graduatestudies/thesis/default.asp> and can also be purchased at the university bookstore.

We look forward to working with you.

akk/sbp

GRADUATE STUDENT PROGRESS REPORT

Report for the month of _____

To Be Accomplished During the Following Month:

Please have your Major Professor Initial the copy you turn in.

THE REQUIREMENTS OF SUPPORT ARE AS FOLLOWS:

1. CONTINUED HIGH SCHOLASTIC ACHIEVEMENT.
2. SATISFACTORY PROGRESS ON YOUR THESIS/DISSERTATION RESEARCH.
3. A WORK EFFORT ON YOUR RESEARCH PROJECT OF 20 HOURS PER WEEK.
4. ATTENDANCE AT WATER CENTER SPONSORED SEMINARS.
5. A RESEARCH REPORT (thesis/dissertation).

In the interest of maintaining the research documentation produced by graduate students funded by the Water Center, a CD with the following contents will be required before the final thesis signatures are granted:

- a. Final copy of the thesis/dissertation in digital form. This should include:
 - Raw data files.
 - Word processing documents
 - Graphs and tables
 - Photos
- b. All graphs generated using a spreadsheet or graphics package will also be required in either bitmap (bmp) or tif files.
- c. Photos should be in a common graphics file format (bmp, tif, etc.).
- d. Index file (ascil) with a list of all the computer files contained on the CD and a description of each file's contents, including the software used to develop the document.

If you have questions about the generation of graphic files, please contact Yvette Clark (yrclark@ntech.edu / ext. 3004) or Amy Knox (akknox@ntech.edu / ext. 3464).

The Water Center will burn the information to the CD. The student should provide the CD.

THESIS/DISSERTATION STATEMENT

Introduction	1 or 2 pages
Objectives	1 or 2 pages
Literature Review	
Methods and Materials	
Anticipated Results	2 or 3 pages
Time Schedule	1 page
Budget	1 page

PROPOSED BUDGET

Salaries and Wages

Graduate Student

Expendables

Chemicals, Supplies
Tuition and Fees
Literature Search, etc.

Non-Expendables

Equipment

Travel

of Trips @ \$

TOTAL PROJECT COSTS

\$ _____

WA# _____

LABORATORY INTRODUCTION

The Environmental Quality Laboratory (EQL) provides analytical support for the Center for the Management, Utilization and Protection of Water Resources research projects, Tennessee Technological University research projects, and regional community service. The EQL offers graduate students a working atmosphere to learn laboratory and analytical procedure and to gain valuable experience. Additionally, the lab staff conducts lectures and demonstrations on environmental analysis for various classes in chemistry, engineering, and biology. The laboratory operates as a non-profit support laboratory analyzing primarily water and wastewater samples.

The EQL is state certified for the analysis of drinking water.

A list of EQL staff and their duties are:

- Daniel Dodson, Technical Laboratory Manager: supervision, coordination, scheduling, data review and dissemination, organic analysis.
- Ginger Ensor, Research Assistant II: metals analysis, lab orders, inventory, supervision.
- Michael Kuley, Research Assistant II: wet chemical analysis, field work coordination, field equipment, safety officer, Q.C. officer, microbiology, supervision.
- Phillip Burr, Research Technician I: water sample analysis, water sample collection, logbook and equipment maintenance, sample custodial duties.

Figure 1 represents the physical layout of the laboratory, indicating the location of safety equipment such as first aid kits, fire extinguishers, and eye wash stations.

It is important to stress that the laboratory is a multi-user, multi-function facility. Lab space is limited. A variety of commercial and research work is going on at all times, so it is possible that not all needs can be accommodated. Dennis George and Daniel Dodson regulate the use of lab facilities. If you wish to use the lab facilities or services, please obtain approval from Dr. George at extension 3507 or Mr. Dodson at extension 3061.

Since the lab operates on a non-profit, break-even basis, all work must have a project number. Instruments, reagents, salary and expenses must be considered. Maintaining a certified laboratory with strong emphasis on QA/QC procedures necessitates fees and reimbursement schedules to ensure laboratory success.

The Water Center's laboratories are available for use by any University personnel having approval from the Water Center Director.

Many of your research projects will have funds allocated for analytical work. Even if your project requires no laboratory work, your major professor may require you to spend some time in the lab learning laboratory procedures. Laboratory experience is a necessary step in graduate education and will benefit you in future employment.

GETTING STARTED

Obtain approval from Dr. George or Mr. Dodson. Your project number may be obtained through the Water Center's accounting office.

Familiarize yourself with all appropriate rules, tests and safety procedures.

Discuss training requirements, technical assistance, and work area requirements with Mr. Dodson. Bring your thesis/dissertation statement and project number, along with a budget for analytical costs.

Before you use the facilities or instruments, you must be trained and competent on their use and care. If you require training and instruction for the use of a certain instrument, Mr. Dodson will assign a staff member to train you. Some instruments can be run with minimal training while others may require months of careful instruction. Training costs vary from \$50 to \$300.

Samples requiring analysis by the lab must be submitted to Sandy Dodson for sample login. Samples to be logged should be brought with a completed chain-of-custody form to PH 233. Forms may be obtained in the Water Center office, PH 233. No samples should be placed in the walk-in cooler or left on a lab bench without being logged in. All samples must be labeled with your name, date, time, and any sample description. A complete list of parameters to be analyzed must accompany samples.

You must provide notification before you bring any samples into the lab for analysis. Use of the lab facilities must be scheduled well in advance (at least two weeks prior) with the lab manager so that conflicts, short holding times, and analytical difficulties can be avoided.

USE OF FIELD EQUIPMENT

Scheduling and Check-Out

Due to a limited supply of equipment, the lab loans field equipment on a first-come, first-served basis. Plan your sampling trip well in advance and contact Michael Kuley at extension 3067 to make equipment reservations or cancellations. After making reservations, come to PH 342 to check out the needed equipment. Boat users should contact their project director on the scheduling, use, and care of boats.

Field equipment such as Hydrolabs, pH meters, DO meters, and conductivity meters, must be calibrated by users/students before and after check-out. Therefore, users should allow sufficient time for the calibration process when scheduling a time to pick up meters from the lab.

MAINTENANCE

The quality of data you collect depends upon the proper care and use of equipment. It is the responsibility of the user to check the instruments for proper operation before taking the equipment into the field. Low batteries, broken probes, and frayed cables mean the loss of valuable data and added expense. These problems may be avoided by following the manufacturer's maintenance procedures. Your project will occasionally need to furnish batteries.

INVENTORY

The Water Center must periodically inventory its equipment. Please honor our requests to return this equipment by the specified date so that we may expedite the inventory process.

PROBLEM AREAS

Broken probes, equipment left turned on, submersion in water, and the late return of equipment are major sources of problems. Please help us avoid these problem areas.

TRAINING

Field equipment users that need training on a particular instrument should contact Mr. Kuley.

LABORATORY OFFICE PROCEDURES

SAMPLE LOGIN

All samples that have prior approval by the Water Center lab for analysis need to be brought to PH 233 for proper login. All samples need to have your initials, date, description, log number, and a list of parameters to be analyzed before analysis can begin. Samples must be submitted with a completed chain-of-custody form. Forms may be obtained from the Water Center office, PH 233.

Analysis by the Water Center lab does cost money. When you bring in your samples, also be prepared to give your project account number.

After the lab has completed analysis, a report will be prepared by the lab manager with the results of your analysis. Also at this time, an invoice or IDT will be prepared for the cost of analysis.

INSTRUMENT MANUALS

Manuals for the instruments located in the Water Center's labs can be found in PH 342. You may review these manuals or make a photocopy, but you cannot remove them from the office.

ORDERING PROCEDURES

All purchases must have prior approval from your project director. If your project is a Water Center funded project, Dr. George must approve your purchases. At the beginning of your project, discuss with your project director your anticipated needs for supplies, chemicals, etc., for the analysis and field work that you will be performing. Chemicals and supplies may be purchased through the Water Center office (PH 233) after prior approval has been given for your purchases.

Faculty and students placing orders should contact Sandra Pigg in the Water Center office, PH 233. The time of delivery does vary, so please order according to your time schedule. Most purchases from Fisher Scientific are usually delivered within 7 working days, but if the item is not in stock, it can take up to several weeks for delivery. We are restricted in our use of "express" delivery, so plan accordingly.

Please note the University is currently under contract with Fisher Scientific Products and VWR for all laboratory purchases. This provides discounts for the majority of our purchases. If you need a product that is not available through Fisher Scientific, you can purchase it elsewhere. Any order that is not purchased from Fisher Scientific has a \$4,999.99 limit. If you should need to purchase an item or items that are over this amount, you will need to bid this item. Allow at least one month to have an item placed on bid, purchased, and delivered. A bid must be written with the exact specifications of what you need and what is to be expected from the company where it is purchased. The Water Center office can supply you with sample bids.

LABORATORY USE

General Laboratory Guidelines

Laboratory hours are 8:00 AM – 4:30 PM, unless other arrangements are made with the lab manager. Generally, technical assistance and information from the lab staff are only available during working hours. In case of an emergency, you may reach the lab staff at home by calling the phone numbers posted in the wet chemistry laboratory.

Do not touch the work of others. Do not remove equipment and/or supplies from any lab.

All of your samples, reagents and supplies must be clearly labeled with your name, date, description, and log number.

For safety reasons, no shorts or open-toed shoes are allowed in the lab. Safety glasses or goggles must be worn at all times when in the lab.

No food or drinks are allowed in any lab. Absolutely no smoking in the labs.

Telephones are for business use only. No personal long distance calls are to be made from any of the lab phones. All long distance calls placed must be logged in the books provided by each phone.

Laboratory keys are issued to students only when needed. The lab manager approves all key requests. Upon completion of your laboratory tasks, keys are to be returned.

All students are required to maintain a laboratory notebook, documenting all sample procedures and results in a permanently bound notebook. This notebook must be available to the lab staff upon request for inspection. All QA/QC information pertaining to your sample should be well documented. It is strongly suggested that you maintain backup copies of all data and notebook entries.

Computers in the lab are mainly for research use, such as data processing, information search, and e-mail. Playing computer games and surfing the internet for personal purposes are not allowed.

It is important that you inform the lab staff of any problems. If you are having difficulty with any instruments or procedures, please let us know. If you notice that a general lab supply is running low, please contact Ginger Ensor at extension 3538. Ms. Ensor places orders for lab staff and general supplies. Graduate students who need to order supplies for projects should contact Sandra Pigg at extension 3519.

Unless purchased for your project, all chemicals, supplies, and glassware are the property of the Water Center lab. Do not remove anything from its place without approval. If your experiment requires large amounts of chemicals, filters, or glassware, you must purchase them from your project funds. If you use any chemicals from the Water Center storeroom, please return them as soon as you are through. There is an inventory sheet in the chemical store room which should be filled out on each chemical you use. Be careful not to contaminate chemicals. **Once you have removed any chemical from its bottle, it cannot be put back into the bottle, but should be disposed in accordance with proper waste handling procedures.**

Glassware from PH 428 is available for graduate student use on a day-to-day basis. If glassware is needed for an extended period of time, it must be checked out with the approval of the lab manager. Dirty glassware should be returned to the center table in the dish room or placed into one of the containers in the lab labeled for dirty glassware after it has been rinsed out thoroughly with tap water.

Any item or supplies your project has purchased must be labeled and stored in your assigned work area. All project samples, reagents, supplies, and equipment must be labeled with your name, project number, and date. Unlabeled solutions and materials will be discarded. Lockable drawers and cabinets can be assigned by the lab manager.

Under no circumstances remove chemicals, specialized glassware, reagent pillows, pipettors, etc., from general circulation. "Stashing" of items or materials will not be allowed. Do not store solutions in volumetric flasks.

WORK AREAS

The lab manager will assign you a work area, when requested, if space is available. You have the responsibility of keeping your space neat and orderly. Lockable drawers and cabinets are available for storage of project and personal items.

Cluttered, messy work spaces can be a safety hazard. **Remember that cleanup is a part of every analysis. If you do not have time to clean up, then you do not have time to perform the analysis.** When you have completed your lab work for the day, store your samples, clean up all lab benches and equipment used, and place dirty glassware on the center table in PH 429. If you spill anything, especially on or around balances, be sure to clean it up immediately and completely.

Again, it is important that all samples, reagents, chemicals, and equipment are properly labeled. **Any unlabeled solutions left on lab benches will be considered waste and may be discarded.**

WHEN YOUR PROJECT IS FINISHED

When you complete your lab work, you must remove all items from your designated work area, return any keys, and dispose of all wastes. Items purchased for your project are to be turned over to the lab or your major professor. Dispose of all samples and reagents stored in the cold room. If your project involved an experimental set up, check to see if it must be dismantled. Any samples left after your project is completed will be discarded.

AREAS OF SPECIAL CONCERN

- Analytical balances are important and delicate instruments. You must be trained on the use of the balances before you weigh anything. You should check your readings occasionally with calibrated weights. Please help us keep our balance areas clean. Reset to zero when finished. If using analytical balances, close the doors when finished. Do not attempt to calibrate the balances. They are calibrated by a certified technician annually. **Do not move balances.**
- Return your chemicals to the proper storage location. **Do not return any chemicals to stock bottles.**

- Handheld pipettors are extremely delicate instruments and are frequently abused. You must be trained on the proper care and maintenance of these before you use them.
- Lab glassware and equipment are expensive. Please take extra care when handling items such as volumetric flasks and pH electrodes. Help us reduce unnecessary breakage.
- Assist us in keeping the acid dispensing station, located in the left hood in PH 428, clean and safe. When you dispense or clear bubbles from the repipettors, please discard this waste. Neutralize and clean up any spills or drops with baking soda.
- Carts are not for storage of samples or project materials. Please clean and return empty carts to the dish room at the end of each day.
- Clean up is an important part of laboratory work. Please maintain a clean, safe work area for yourself and others. Workspace is very limited, so use space efficiently.
- **Do NOT store solutions in volumetric flasks!** This ties up glassware that may be needed by someone else. There are ample supplies of various sizes of bottles for solution storage.
- Leave the sashes for fume hoods down except when in use, if possible. We have been asked by facilities personnel to do this in order to minimize the amount of return air that must be heated or cooled which will be exhausted out through the hoods, which could result in higher utility costs.

- ⊙ = Eye Wash
- ▲ = Fire Alarm
- 🧣 = Fire Blanket
- 🔥 = Fire Ext.
- 🩹 = First Aid
- ⚡ = Fuse Box
- ☒ = Fume Hood
- 🚿 = Shower
- 🗑️ = Sink

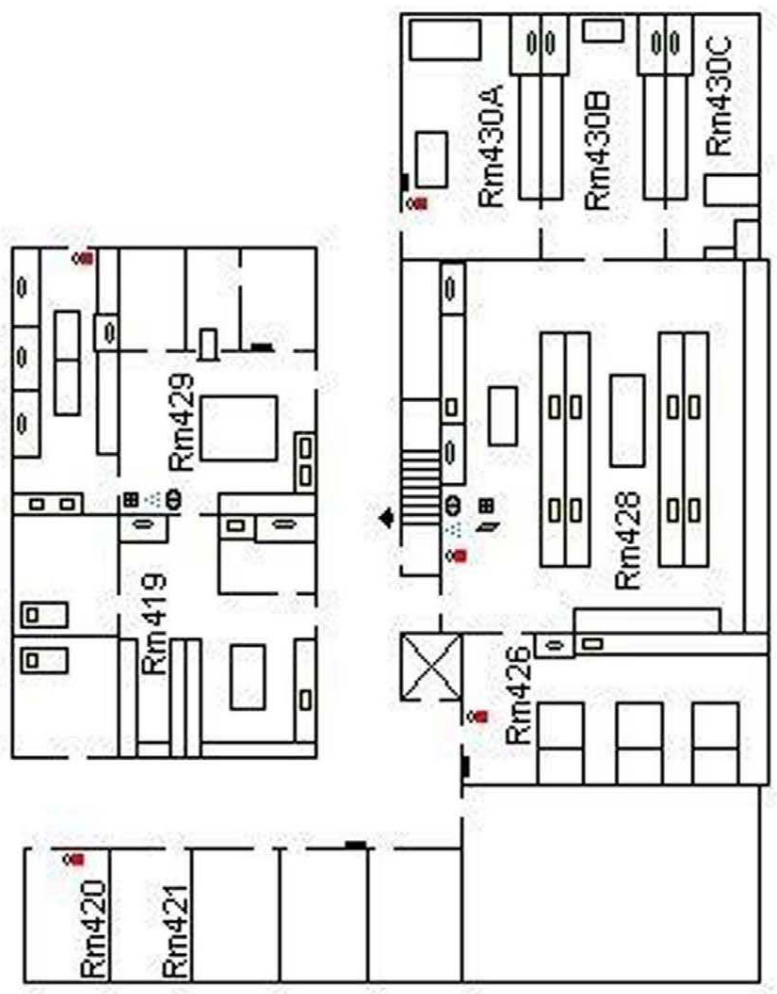


Figure 1

Policy on Patents and Copyrights | Policy 15.0

Tennessee Technological University acknowledges that the faculty and staff may from time to time conceive an idea or discover a process that could lead to the development of a patent or the production of copyrightable materials. The University encourages such activities by the faculty and staff and recognizes its responsibility to see that ideas and discoveries are administered for the best interest of all parties concerned, including the public. Since the results of research conducted as topics for M.S. theses and Ph.D. dissertations cannot be held confidential/proprietary, it is important that the research topics and results be open for public inspection. Further, it is critical that students not use work on sponsored research as their topic if the research is to be held as confidential/proprietary. We are working with TBR staff for an acceptable method of handling this issue.

NOTE: If there is any variance between Tennessee Technological University's Intellectual Property policy and Tennessee Board of Regents's (TBR) Intellectual Property policy, the TBR policy shall take precedence.

Statement of Policy

1. Authorization

The University is authorized to seek and hold patents and copyrights, to assign their rights, and to execute royalty-sharing agreements subject to the approval of the Chancellor or his designated representative. In executing this authority, the University will develop and implement a campus wide policy on patents and copyrights consistent with Tennessee Board of Regents Policy **5:01:06:00** dated September 24, 1982 and September 21, 1990.

2. Committee on Patents and Copyrights

The University shall create a committee to advise and assist the President in all matters involving patents, trademarks and copyrights. The committee shall consist of faculty and staff experienced in research, innovation and the production of copyrighted materials and a majority of its membership shall be selected from the faculty. The committee shall develop procedures for its conduct of business and all forms necessary for the implementation of this policy.

3. Applicability

This policy shall apply when any one of the following three factors exist:

1. University sponsorship (including released time) of a project leading to the discovery or development of materials
2. Significant use of the University's personnel, facilities, services or equipment (libraries excluded) in the discovery or development process; or
3. The funding of a project through the University by agencies or persons outside the University.

4. Non-applicability

The policy shall not apply when inventions, discoveries or copyrightable materials are developed solely through individual initiative or personal time and not involving significant use of University facilities or services. Non-fee library use is exempted from this policy. Also exempted are scholarly works such as journal articles, chapters in books and books that do not generate income.

5. Responsibilities

1. Individuals to whom this policy applies shall promptly disclose to the University discoveries or invention(s) and copyrightable materials for evaluation and action by the Committee on Patents and Copyrights.
2. The University, acting through its Advisory Committee on Patents and Copyrights, shall
(1) act on disclosures with reasonable promptness and good faith and (2) notify the affected person(s) promptly whenever it decides to pursue, abandon or seek commercialization of an invention or copyrightable materials.
3. It is the responsibility of a student who is employed by outside entities to resolve any conflicts between this policy and provisions of agreements with an employer before beginning any work at the University that may lead to the development of intellectual property.
4. If a student makes a patentable invention or develops copyrightable materials while in a class that is, or may be subject to the University's ownership in accordance with the Policy on Patents and Copyrights, the student will disclose the patentable invention or copyrightable material to the University. All faculty members teaching courses in which students do work that may lead to patentable inventions or copyrightable material should inform the students of the existence of (1) any relationships between the University and outside organizations or companies that may have a right to any invention and (2) the existence of the Policy on Patents and Copyrights.

6. Income Sharing

Income shall be shared, net of the costs of obtaining, licensing, defending and administering patents, trademarks and copyrights. Income sharing should be proportional to the percent of effort of the individual(s) and unit(s) involved.

1. Inventor(s)' Share of Income - In no case shall an inventor(s)' share of the net income be less than 50 percent for patents and 50 percent for copyrights. Percentages above 50 percent may be recommended by the committee for consideration by the President or the President's designee.
2. University's Share of Income - The remaining 50 percent of net income shall be shared as follows: 20 percent to the department(s) or unit(s) which sponsored the development of the intellectual property, 10 percent to the origination college(s) and 20 percent to the Patents and Copyrights Account maintained in the Office of Research.
3. Agreement Relative to Income Sharing - The inventor(s) and unit(s) involved shall have written, signed agreements relative to the distribution of income prior to approaching the committee to pursue a patent or copyright.

7. License

Where University sponsorship or significant University resources are involved, the agreement with an individual shall provide the University an exclusive license, and the University shall provide for reservation to the Tennessee Board of Regents a nonexclusive, irrevocable license in the invention, discovery, or copyrightable materials with power to grant licenses for all governmental and educational purposes.

8. Waiver and Assignment of Rights

Nothing in this policy shall preclude mutually agreed on contractual arrangements between the University and an individual wherein either party may agree to waive rights to patents, discoveries or copyrightable items. Furthermore, the general obligation of faculty members to produce scholarly and creative works shall not for purposes of this

policy be construed as an institutional assignment affecting title claims to inventions, discoveries or copyrightable materials.

9. Appeals Procedure

All decisions of the Advisory Committee on Patents and Copyrights may be appealed in the following manner:

1. Executive Officer of the Patents and Copyrights Committee - Appeals may be directed to the Executive Officer of the committee by communicating in writing the substance of the appeal within thirty (30) days of notification of the committee's decision. The Executive Officer will establish, within ten (10) days of receipt of the appeal, a three-person panel consisting of one member of the committee on Patents and Copyrights and two other faculty or staff members of the University who have a knowledge of patents and copyrights. The Appeals Committee will elect a Chairperson and will review all materials and render a decision within ten (10) days.
2. Further Appeals - If an individual wishes to appeal further, the policies and procedures of Tennessee Technological University and the Tennessee Board of Regents will be followed.

10. Definitions

1. Individuals (Persons)
 1. Faculty - All full-time and part-time employees who hold academic rank and who are directly engaged in departmental instruction, research or public service.
 2. Staff - All full-time and part-time employees who do not hold academic rank.
 3. Students - Full-time and part-time graduate or undergraduate, regardless of whether the student receives financial aid or is employed by Tennessee Technological University.
 4. Consultants - Individuals consulting to the University.
2. Net Costs - All direct costs of obtaining, licensing, defending and administering patents, trademarks and copyrights.
3. Copyrightable Materials - Those materials or works which reasonably appear to qualify for protection under the statutes. Copyrightable materials include, but are not limited to:
 - (1) books, texts, glossaries, bibliographies, study guides, laboratory manuals, syllabi, tests and proposals;
 - (2) computer programs;
 - (3) films, filmstrips, charts, transparencies and other visual aids;
 - (4) lectures, musical or dramatic compositions, unpublished scripts; and
 - (5) video or audio tapes, cassettes and
 - (6) student theses and dissertations.
1. Ownership of a thesis or dissertation generated by research performed in whole or part by a student with financial support in the form of wages, salaries, stipend(s) or grant(s) from funds administered by the University should be determined in accordance with the terms of the support agreement, or in the absence of such terms, will become the property of the University. Copyright ownership of a thesis or dissertation will reside with the University if there is significant use of University personnel, facilities, services or equipment as defined in Section 10.5 (Significant Use).

4. Patentable Materials - Those innovations, inventions, discoveries or developments which reasonably appear to qualify for protection under the patent laws of the United States or Protection statutes. The United States Code Annotated, Title 35, Section 101, as amended, provides that "whoever invents or discovers any new and useful process, machine, manufacture or composition of matter or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title."
5. Significant Use - Significant use of University personnel, facilities, services or equipment shall be defined to include a cost to the institution in the amount of \$2,500 or more (in 2001 dollars). Use of University microcomputers is exempted.

Approved:

Patents and Copyrights Committee 11/20/97

TTU Administrative Council 1/21/98

Tennessee Board of Regents 3/11/98

Office of Research (<http://www.tntech.edu/research/ip-pol/>)

Tennessee Tech University

P.O. Box 5036 Cookeville, TN 38505 Phone: (931) 372-3374 Fax: (931) 372-6374 Questions or Comment, please e-mail: Research@tntech.edu

Intellectual Property | Procedures

These guidelines define the procedures to be used by the Advisory Committee on Patents and Copyrights in implementing Tennessee Technological University's Policy dated March 11, 1998

Preamble

The University has established an Advisory Committee on Patents and Copyrights for the purpose of advising the President on all matters involving patents and copyrights. Membership shall be composed of faculty and staff experienced in research, innovation and the production of copyrightable materials. A majority of the membership shall be from the faculty.

1. Meetings

The Committee shall meet as often as necessary to transact its business, but no less than once per semester.

2. Documents

The Committee shall develop the documents necessary for the pursuit of the patent, trademark and copyright process. The completed documents shall be submitted to the President or designee for approval.

3. Disclosures

The Committee, through its Chairperson, shall receive disclosures of inventions and copyrights from persons who are subject to Section 3.0 of the policy. The content of the disclosure document will be evaluated as to clarity, completeness and its applicability to Section 3.0 of the policy.

4. Rights

On receipt and acceptance of a disclosure document, the Committee will identify the source of support; that is, external funding, University funding and/or use of University facilities. The Committee Chairperson will request the inventor or person disclosing copyrightable materials to execute the Assignment of Rights document assigning all rights to the University and to the Tennessee Board of Regents in accordance with Section 7.0 of the policy.

1. Significant Use

- Computers
- Faculty Research Fund
- Library Loan Service

2. Copyrights

The individual(s) developing copyrightable materials shall receive not less than 50 percent of the net income.

3. Patents

The individual(s) disclosing the invention shall receive not less than 50 percent of the net income.

5. **Assessment**

Internal Review

The Committee will conduct an internal evaluation of the idea contained in the patent/copyright disclosure to determine if it appears valid and clearly presented. In this evaluation, assistance from committee members as well as from faculty and staff of the University may be sought.

If the preliminary evaluation is positive, a determination will be made whether waivers or releases are needed to satisfy the requirements of the party or agency funding the project.

If the preliminary evaluation is negative, the disclosure will be returned to the submitting person with an explanation of the rejection. The disclosure may be reconsidered with new information or clarification of the original information. If it is resubmitted, then the Committee will proceed as if it were an original submittal.

External Review

If the internal preliminary evaluation is positive and the appropriate waivers regarding the support source have been acquired, the disclosures may be sent to an organization or a patent attorney for the second level of evaluation. This level of evaluation is a cursory review by professionals in the appropriate area of the art to determine if the idea is possibly patentable.

6. **Recommendations**

After the Committee has completed its investigation, a report containing recommendations will be sent to the President or designee recommending

- o to pursue patent/copyright proceedings or
- o to return the disclosure to the inventor and waive all claims.

7. **Actions**

President

The President will indicate in a reasonable time whether or not the recommendations from the Committee are acceptable (or to be modified) and will give directions to the Committee for actions, if any, to be taken.

Committee

If a patent/copyright application is to be initiated by the University, the Assignment of Rights document will be sent by the Chairperson to the President or designee for signature and approval of the royalty-sharing fee. If approved, the Chairperson will distribute copies to the inventor and other appropriate parties.

8. Patent Application

Within three (3) months after receiving the President's approval, the University will proceed with the application by either

- o contracting with a patent attorney or
- o entering into an agreement with an evaluation and/or marketing individual or organization.

If the University chooses neither to file an application nor dedicate to the public an invention in which it holds property rights, the University will waive all rights and return materials to the inventor on request.

9. Patent Marketing

Within six (6) months after the date of issuance of the letters of patent, the University must demonstrate a commitment toward the commercial development of the invention. If a patent is to be licensed, the license agreement must be approved by both the inventor and the University. In the event that the University decides not to seek commercial development of the invention, the inventor may request a return of all rights.

10. Copyright Application

The Committee will proceed with the application either with internal or external assistance. The author has the right to choose the publisher.

11. Financial

Before entering into an agreement for patent or copyright application, the Committee will determine the availability of funds to pursue the application. If funds are not available, the Committee will return the disclosure and assignments document to the inventor.

Approved: Patents and Copyrights Committee 11/20/97 TTU Administrative Council
1/21/98 Tennessee Board of Regents 3/11/98

Office of Research (http://www.tntech.edu/research/ip_procs) Tennessee Tech University

P.O. Box 5036 Cookeville, TN 38505 Phone: (931) 372-3374 Fax: (931) 372-6374

Questions or Comment, please e-mail: Research@tntech.edu

MEMORANDUM

TO: Graduate Students

FROM: The Office of Research and Graduate Studies

DATE: Fall 2011

SUBJECT: Policy on Misconduct in Research

Research and other scholarly activities represent important components of the mission of Tennessee Technological University (TTU). The university receives funding for these activities from federal, state, and other sources. As good stewards of this funding and of the research enterprise, faculty, students, staff, and others have a responsibility to ensure that high ethical standards are maintained in the research that is performed under the university's name. The policies and procedures described in the above-referenced policy (available on-line at <http://www.tntech.edu/research/misconduct/>) are designed to maintain the integrity of all research and related activities at TTU.

For purposes of these policies and procedures, misconduct in research occurs when there is fabrication, falsification, plagiarism, or other practices that seriously deviate from those that are commonly accepted for proposing, conducting, or reporting research. It does not include honest error or honest differences in interpretations or judgments of data. The burden of proof of an allegation of misconduct in research lies with TTU.

These policies and procedures apply to all individuals involved in research in association with TTU including faculty, administrators, guest researchers, volunteers, technicians, collaborators, other staff, and students. All employees or individuals associated with TTU (including graduate students) are required to report observed, suspected, or apparent misconduct in research to the research integrity officer, currently the Associate VP for Research and Graduate Studies. Those who report alleged misconduct are responsible for making allegations in good faith, maintaining confidentiality (consistent with the laws of the State-of-Tennessee), and cooperating with an inquiry or investigation. If an individual is unsure whether a suspected incident of misconduct falls within the definition, he/she may contact the research integrity officer to discuss the suspected misconduct informally.

As representatives of TTU, your confidentiality is held in the highest regard.

Plagiarism: What It is and How to Recognize and Avoid It

What is Plagiarism and Why is it Important?

In college courses, we are continually engaged with other people's ideas: we read them in texts, hear them in lecture, discuss them in class, and incorporate them into our own writing. As a result, it is very important that we give credit where it is due. Plagiarism is using others' ideas and words without clearly acknowledging the source of that information.

How Can Students Avoid Plagiarism?

To avoid plagiarism, you must give credit whenever you use

- another person's idea, opinion, or theory;
- any facts, statistics, graphs, drawings—any pieces of information—that are not common knowledge;
- quotations of another person's actual spoken or written words; or
- paraphrase of another person's spoken or written words.

These guidelines are taken from the Student Code of Rights, Responsibilities, and Conduct.

To help you recognize what plagiarism looks like and what strategies you can use to avoid it, select one of the following links or scroll down to the appropriate topic.

- [How to Recognize Unacceptable and Acceptable Paraphrases](#)
 - [An Unacceptable Paraphrase](#)
 - [An Acceptable Paraphrase](#)
 - [Another Acceptable Paraphrase](#)
- [Plagiarism and the World Wide Web](#)
- [Strategies for Avoiding Plagiarism](#)
- [Terms You Need to Know \(or What is Common Knowledge?\)](#)

How to Recognize Unacceptable and Acceptable Paraphrases

Here's the ORIGINAL text, from page 1 of *Lizzie Borden: A Case Book of Family and Crime* in the 1890s by Joyce Williams et al.:

The rise of industry, the growth of cities, and the expansion of the population were the three great developments of late nineteenth century American history. As new, larger, steam-powered factories became a feature of the American landscape in the East, they transformed farm hands into industrial laborers, and provided jobs for a rising tide of immigrants. With industry came urbanization the growth of large cities (like Fall

River, Massachusetts, where the Bordens lived) which became the centers of production as well as of commerce and trade.

Here's an UNACCEPTABLE paraphrase that is **plagiarism**:

The increase of industry, the growth of cities, and the explosion of the population were three large factors of nineteenth century America. As steam-driven companies became more visible in the eastern part of the country, they changed farm hands into factory workers and provided jobs for the large wave of immigrants. With industry came the growth of large cities like Fall River where the Bordens lived which turned into centers of commerce and trade as well as production.

What makes this passage plagiarism?

The preceding passage is considered plagiarism for two reasons:

- the writer has only changed around a few words and phrases, or changed the order of the original's sentences.
- the writer has failed to cite a source for any of the ideas or facts.

If you do either or both of these things, you are plagiarizing.

NOTE: This paragraph is also problematic because it changes the sense of several sentences (for example, "steam-driven companies" in sentence two misses the original's emphasis on factories).

Here's an ACCEPTABLE paraphrase:

Fall River, where the Borden family lived, was typical of northeastern industrial cities of the nineteenth century. Steam-powered production had shifted labor from agriculture to manufacturing, and as immigrants arrived in the US, they found work in these new factories. As a result, populations grew, and large urban areas arose. Fall River was one of these manufacturing and commercial centers (Williams 1).

Why is this passage acceptable?

This is acceptable paraphrasing because the writer:

- accurately relays the information in the original uses her own words.
- lets her reader know the source of her information.

Here's an example of quotation and paraphrase used together, which is also ACCEPTABLE:

Fall River, where the Borden family lived, was typical of northeastern industrial cities of the nineteenth century. As steam-powered production shifted labor from agriculture to manufacturing, the demand for workers "transformed farm hands into industrial laborers," and created jobs for immigrants. In turn, growing populations increased the size of urban areas. Fall River was one of these hubs "which became the centers of production as well as of commerce and trade" (Williams 1).

Why is this passage acceptable?

This is acceptable paraphrasing because the writer:

- records the information in the original passage accurately.
- gives credit for the ideas in this passage.
- indicated which part is taken directly from her source by putting the passage in quotation marks and citing the page number.

Note that if the writer had used these phrases or sentences in her own paper without putting quotation marks around them, she would be PLAGIARIZING. Using another person's phrases or sentences without putting quotation marks around them is considered plagiarism **EVEN IF THE WRITER CITES IN HER OWN TEXT THE SOURCE OF THE PHRASES OR SENTENCES SHE HAS QUOTED.**

Plagiarism and the World Wide Web

The World Wide Web has become a more popular source of information for student papers, and many questions have arisen about how to avoid plagiarizing these sources. In most cases, the same rules apply as to a printed source: when a writer must refer to ideas or quote from a WWW site, she must cite that source.

If a writer wants to use visual information from a WWW site, many of the same rules apply. Copying visual information or graphics from a WWW site (or from a printed source) is very similar to quoting information, and the source of the visual information or graphic must be cited. These rules also apply to other uses of textual or visual information from WWW sites; for example, if a student is constructing a web page as a class project, and copies graphics or visual information from other sites, she must also provide information about the source of this information. In this case, it might be a good idea to obtain permission from the WWW site's owner before using the graphics.

Strategies for Avoiding Plagiarism

1. Put in **quotations** everything that comes directly from the text especially when taking notes.
2. Paraphrase, but be sure you are not just rearranging or replacing a few words.

Instead, read over what you want to paraphrase carefully; cover up the text with your hand, or close the text so you can't see any of it (and so aren't tempted to use the text as a "guide"). Write out the idea in your own words without peeking.

3. **Check your paraphrase** against the original text to be sure you have not accidentally used the same phrases or words, and that the information is accurate.

Terms You Need to Know (or What is Common Knowledge?)

Common knowledge: facts that can be found in numerous places and are likely to be known by a lot of people.

Example: John F. Kennedy was elected President of the United States in 1960.

This is generally known information. **You do not need to document this fact.**

However, you must document facts that are not generally known and ideas that interpret facts.

Example: According to the American Family Leave Coalition's new book, *Family Issues and Congress*, President Bush's relationship with Congress has hindered family leave legislation (6).

The idea that "Bush's relationship with Congress has hindered family leave legislation" is not a fact but an *interpretation*; **consequently, you need to cite your source.**

Quotation: using someone's words. When you quote, place the passage you are using in quotation marks, and document the source according to a standard documentation style.

The following example uses the Modern Language Association's style:

Example: According to Peter S. Pritchard in *USA Today*, "Public schools need reform but they're irreplaceable in teaching all the nation's young" (14).

Paraphrase: using someone's ideas, but putting them in your own words. This is probably the skill you will use most when incorporating sources into your writing. Although you use your own words to paraphrase, you must still acknowledge the source of the information.

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UNIVERSITY ACCOUNT HOLDS

In order to avoid the delay of receiving your diploma or reviewing your transcript, each graduate student should check his/her account on the web for a balance and pay it before the close of business on Friday before graduation. Please respond to any correspondence from loan accounting before close of business on Friday before graduation. This will give the Accounts Receivable office a chance to remove the student's name from the "hold" list.

The list of students who cannot have their diplomas until they resolve the issue of an owed balance on their student account or Business Office loan account is provided to the Graduate School.

There are various university entities that could place a hold on the student account due to a balance owed. Some of those include: Health Services (immunizations/records), International Student Affairs, Student Housing (dorm/Tech Village), Library (book returns/dues) and University Police (parking tickets).

WORKERS' COMPENSATION PROGRAM

If you were to be in a work-related accident while doing research, please follow the steps outlined below.

Important Phone Numbers and Addresses

Sedgwick CMS - Knoxville
P.O. Box 14484
Lexington, KY 40512-4484
1-800-526-2305 (toll-free)
(865) 583-8310 (facsimile)

Rockport Healthcare
1-800-734-4460

To File a New Claim:
1-866-245-8588 (toll-free)

TTU# 33278

<http://treasury.tn.gov/wc>



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State of Tennessee Workers' Compensation Program



If you have an accident at work:

- ◆ Contact your supervisor to report your injury.
- ◆ Contact the Call Center at 1-866-245-8588 to file your claim.
- ◆ If you need medical treatment, call the State's Administrator, Sedgwick Claims Management Services, at 1-800-526-2305, or Rockport Healthcare at 1-800-734-4460, **for the name of a provider who is authorized to treat you.**

You must choose a provider from the state's directory for full payment of your bills. If you use an unauthorized provider, you will be responsible for payment of your bills. If you have questions, call the Treasury Department Division of Claims Administration at (615) 741-2734. For general information, go to <http://treasury.tn.gov/wc>.